

### IN THE APPLICATION

N.E. On page 4, line 20, please change "bring" to "bringing". On page 9, line 7, please change "...may be a electrically..." to "...may be an electrically..." and on line 19, please change "a" to "an". One page 11, line 28, please change "dependant" to "dependent".

### IN THE CLAIMS

Please cancel Claims 2, 6 and 25. Please add new Claim 39. Please amend Claims 1, 3-5, 7, 9-17 and 25-38 as follows:

1. (Amended) A system for suppressing RF ambient signals from a signal containing both RF radiated emissions of an electronic device and [the] RF ambient signals, the system comprising:

a first RF receiver operative to receive [the] both ambient RF signals and the radiated RF emissions from the electronic device, the first receiver being operative to demodulate and digitize the ambient Rf signals and the radiated RF emissions from the device;

a first RF sensor in electrical communication with the first RF receiver and operative to receive primarily the ambient RF signals and the radiated RF emissions;

a second RF receiver operative to receive primarily [the] ambient RF signals, the second receiver being time and frequency synchronized to said first receiver and operative to demodulate and digitize the ambient RF signals;

said second RF sensor in electrical communication with the second RF

receiver, and located at least ten times further away from the first RF sensor than the distance from the first RF sensor to the device, and operative to receive primarily ambient RF signals ;

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a central computer in electrical communication with the first and second receivers, the central computer being operative to store and process the ambient signals and the radiated emissions from respective ones of the first and second receivers;

wherein the central computer is configured as an adaptive filter operative to suppress the ambient RF signals correlated between the first and second receivers in order to extract the radiated RF emissions of the electronic device.

3. (Amended) The system of Claim [2] 1 wherein the first and second RF sensors are operative to convert RF signals into [a] corresponding voltages.

4. (Amended) The system of Claim [2] 1 wherein the first and second RF sensors are operative to convert RF signals into [a] corresponding electrical currents.

5. (Amended) The system of Claim [2] 1 wherein the first and second RF sensors are RF antennas.

7. (Amended) The system of Claim [2] 1 further comprising:

a first telemetry link between the first RF sensor and the first RF receiver; and

a second telemetry link between the second RF sensor and the second RF receiver.

9. (Amended) The system of Claim [2] 1 wherein the first RF receiver is co-located with the first RF sensor and the second RF receiver is co-located with the second RF sensor.

10. (Amended) The system of Claim [2] 1 wherein the first and second RF receivers are co-located within a single housing.

11. (Amended) The system of Claim 1 further comprising a clock operative to generate a clock signal that synchronizes the first and second RF receivers.

12. (Amended) The system of Claim 11 further comprising an optical fiber extending between and communicating with the first and second RF receivers in order to transfer the clock signal therebetween.

13. (Amended) The system of Claim 11 further comprising an electrically conducting cable, extending between and communicating with the first and second RF receivers, in order

to transfer the clock signal therebetween.

14. (Amended) The system of Claim 1 wherein the second RF receiver comprises a plurality of RF receivers operative to receive primarily the ambient signals.

15. (Amended) The system of Claim 1 wherein the first RF receiver comprises a plurality of RF receivers operative to receive the ambient signals and the radiated emissions from the electronic device.

16. (Amended) The system of claim 1 further comprising:

a first clock in electrical communication with the first RF receiver; and

a second clock in electrical communication with the second RF receiver;

wherein the first clock and the second clock are synchronized in order to synchronize the first and second RF receivers.

17. (Amended) The system of Claim 1 wherein the first and second RF receivers are synchronized via an external RF reference signal.

26. (Amended) The method of Claim [25] 39 wherein the adaptive filter is implemented on a computer and step (e) comprises suppressing the ambient RF signals with

the adaptive filter of the computer.

27. (Amended) The method of Claim [25] 39 wherein at least some of the ambient RF signals have multiple paths, and step (e) comprises suppressing the ambient RF signals having multiple paths.

28. (Amended) The method of Claim [25] 39 wherein step (e) comprises suppressing the ambient RF signals using a Gradient Descent method with the adaptive filter.

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29. (Amended) The method of Claim [25] 39 wherein step (e) comprises suppressing the RF ambient signals using a Stochastic Gradient method with the adaptive filter.

30. (Amended) The method of claim [25] 39 wherein step (e) comprises suppressing the ambient RF signals using a Least Squares method [of] with the adaptive filter.

31. (Amended) The method of Claim [25] 39 wherein step (e) comprises suppressing the ambient RF signals with a Finite Impulse Response filter.

32. (Amended) The method of Claim [25] 39 wherein step (e) comprises suppressing the ambient RF signals with an Infinite Impulse Response filter.

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Cont.

33. (Amended) The method of Claim [25] 39 wherein step (e) comprises suppressing the ambient RF signals with an adaptive filter configured as a neural network.

35. (Amended) The method of Claim [25] 39 further comprising the step of synchronizing the first and second RF receivers prior to step (a).

36. (Amended) The method of Claim 35 wherein the first and second RF receivers are synchronized via a common clock.

37. (Amended) The method of Claim 36 wherein the first and second RF receivers are synchronized via an external RF reference signal.

38. (Amended) A system for suppressing a first set of RF signals from a RF signal containing both [the] a first set of RF signals and a second set of RF signals, the system comprising:

a first RF receiver operative to receive both the first and second set of RF signals, the first RF receiver being operative to demodulate and digitize the first and second sets of RF signals;

a second RF receiver operative to receive primarily the second set of RF signals, the second RF receiver being time and frequency synchronized to the first RF receiver and operative to demodulate and digitize the second set

of RF signals;

Ab cont.  
a central computer in electrical communication with the first and second RF receivers, the central computer being operative to store and process the first and second sets of RF signals from respective ones of the first and second RF receivers;

wherein the central computer is configured as an adapted filter operative to suppress RF signals correlated between the first and second RF receivers in order to extract uncorrelated RF signals measured by the first RF receiver.

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39. (New) A method of suppressing ambient RF signals from an RF signal generated by an electronic device, said RF signal containing radiated RF emissions of said electronic device, using a first RF sensor and receiver, a second RF sensor and receiver, and an adaptive filter, the method comprising the steps of:

- a7
- a) locating said first RF sensor near said electronic device to receive the RF signal therefrom, said sensor placed in electrical communication with said first RF receiver;
  - b) demodulating and digitizing the ambient RF signals and the radiated RF emissions with the first RF receiver;
  - c) locating said second RF sensor at least ten times further away from said first RF sensor than the distance from said first RF sensor to the electronic